

murs. The latter (*i. e.* tricuspid), Dr. G. thinks, are much more frequent than is generally supposed; they are not infrequently confounded with mitral murmurs. We commend this portion of the work to those engaged in the delightful study of cardiac auscultation.

16. Retrospect of 200 Cases under Treatment in the Royal Infirmary, during the Winter Session 1859-'60.

This, with a concluding lecture on the "Study of Clinical Medicine," occupies the last eighty pages of the work.

We repeat that, had time and space permitted, we should gladly have engaged in an extended analytical review of this work. We consider it to be a very valuable contribution to the literature of practical medicine. The cases which are given were recorded either by the author or under his dictation; and we agree with him entirely in the opinion that this is necessary, in order that the clinical teacher may become thoroughly conversant with the cases which he undertakes to study for the benefit of his pupils as well as for his own improvement. It seems to be a common impression that any young physician or an advanced student is, at once, as a matter of course, competent to record cases; but the truth is, it is an art to be acquired by practice, requiring not only a certain amount of knowledge, but an aptitude for observation and description which is to be corrected and improved by discipline, and which some can never acquire. To exercise the senses intelligently and accurately, to observe and reason without pre-conception or bias, to describe literally and truthfully—these are accomplishments by no means so general or so easily acquired as many seem to suppose. As evidence of this, how few of the many contributions to clinical medicine command or deserve entire confidence!

Of Dr. Gairdner as a clinical teacher we have already spoken. We have in this volume his bedside teachings, divested, it is true, of the interest and force derived from witnessing the cases and listening to his voice, but, as some compensation for this loss, perhaps expressed with more precision than is to be expected in an oral discourse. As an American, it is refreshing to find in the volume frequent references to his co-labourers on this side of the Atlantic. The names of Jackson, Ware, Bowditch, and others, are repeatedly mentioned. Aside from the practical information which the volume contains, its tone is well suited to promote, in the minds of those entering upon clinical study, the spirit of a true philosophy.

A. F.

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ART. XVII.—*A System of Surgery, Theoretical and Practical, in Treatises by various Authors.* Edited by T. HOLMES, M. A., Cantab., &c. &c. In four vols. Vol. III. London, Parker Son and Brown. 1862. 8vo. pp. 916.

THE third volume of this authoritative publication has been for some months upon our table, having made its appearance in excellent time for an enterprise of its peculiar character, and considering the number and occupation of the parties engaged upon it. They and their industrious editor have done so well in their progress that we may look forward with confidence to an early fulfilment of the promise of the preface in the appearance of the

concluding volume, with the index, which is to render the whole at once a most convenient and complete text book on hospital surgery.

The present volume at least equals its predecessors in practical interest and value, both as to subjects and the mode of treating them. Indeed we are tempted to regard it as superior in some respects. The circle of authors extends beyond the officers, mostly junior, of the London hospitals, and thus includes more weight and less merely local character; many of the subjects involve the most important and freshly mooted questions in surgery; and all appear to be considered not only with practical skill and experience, but with a careful and generally intelligent reference to the labours of the latest authorities of this country, as well as of Europe. These constant references are invaluable by enabling the reader to follow out his author in his whole course of inquiry, and thus add much of the eclectic usefulness of an encyclopedia to the more direct availability of the work as a clinical guide.

There is not much to be said in favour of the order of arrangement as thus far exhibited. In this respect the editorial offspring of Mr. Holmes must share the lot of many other valuable productions of his British brethren. His system is rather a collection of essays developed and brought together with a common object, but very much at the convenience of the authors, yet under the rule of a director who, doubtless, intends to reconcile all confusion and to avoid the trouble which no classification will prevent, by the ample index which he has announced as in course of preparation.

The papers of this volume are on operative surgery, on the diseases of the organs of special sense (excepting the eye, already published), of the air-passages, and of the organs of circulation, locomotion, and innervation. Lastly, diseases of the organs of digestion are commenced, by a treatise on the affections of the tongue.

In regard to operative surgery, a regular treatise would have led to constant repetition of other portions of the work, and is therefore not attempted. The section is limited to a chapter on minor surgery, one on amputations, another on anæsthesia, and a fourth on plastic surgery, illustrated by the description of such operations as could be conveniently separated from the sketches of the lesions for which they are practised.

The article on minor surgery is brief but practical, and sufficiently comprehensive for a series which includes the consideration of minor surgery topics under various other heads.

Bandages and their applications are disposed of in the first eight pages. Then come the immovable apparatus, in various forms of plastic dressings, for fractures and articular affections; sutures and their application; counter-irritation; acupuncture; electro-puncture; hypodermic and endermic medication; issues; setons; blood-letting; vaccination; caustics; and, finally, the strangulation of nævi and other tumours.

Perhaps the most interesting portion of this chapter is that on sutures. It might have been still more explicit with advantage, and yet is up to the times on the use of silver and iron wire. The author is not very clear in his account of the introduction of the metallic suture into general practice. Dr. Simpson is mentioned, without a date, as the first to draw attention to the subject in his country, and Dr. Sims is then named as the first to make the application in America, "in 1849." The author cites the Anniversary Discourse, before the N. Y. Academy of Medicine, for 1858, by Dr. Sims, "On Silver Sutures in Surgery," without considering that this discourse preceded the paper of Dr. Simpson, and may have prompted the investi-

gations reported in that paper. He also quotes the passage from Fabricius ab Aquapendente, in which the wire suture was recommended two centuries ago; and refers to a report in the *London Lancet*, Nov. 29, 1834, which shows that Mr. Gossett successfully treated a case of vesico-vaginal fistula by silver-gilt wire sutures, fifteen years in advance of Dr. Sims. He should have referred to the experiments of Levert in America (see this Journal for May, 1829), and the cases of Dieffenbach in Germany, and of Mettauer in this country (see this Journal for Nov. 1833 and Feb. 1838), to show that the metallic substitute was known and appreciated in modern practice on both sides of the Atlantic, before the date of Mr. Gossett's publication. Heister, too, as well as Fabricius, could be quoted to prove that the idea of the wire is by no means a recent one in surgery. Still, Dr. Sims is entitled to the merit of its final introduction into practice, and deserves the principal share of the thankful acknowledgment which is given in this article to Dr. Simpson.

The author agrees with Dr. Sims in preferring the silver to the iron wire. A considerable experience with both materials, and especially with iron, inclines us to coincide entirely with Dr. Simpson in being content with well annealed iron wire as quite equal to silver; but a still larger experience with lead wire has convinced us that it is more desirable than either silver or iron in the great majority of cases, on account of its greater cheapness than silver, and its superior pliability. The only objection to the lead is its want of strength in case of strain; though, in some instances, this is a positive advantage.

The next two essays are on amputations and anæsthetics. Their author, Mr. Joseph Lister, Prof. of Surgery in the University of Glasgow, has given two papers, which are excellent, theoretically, practically, and historically; each one being so good a resumé, in fact, that we should be glad to see them published together by their author, separately from the "system," like the tract on gunshot wounds, by Longmore. With some additions and illustrations they would make a very desirable companion to that admirable little book, for the army surgeons of both countries.

There are certainly no subjects upon which the surgeons of America are, and for two years past have been, more keenly alive than these two of amputations and anæsthetics. A vast deal of individual experience, of course, has been acquired, and must continue to accumulate upon the various practical questions which were still more or less unsettled on these points among sensible practitioners at the outbreak of our civil war. But, until the master records of this experience have reached us, in some tolerably digested form, we know of nothing that would attract a closer practical attention, or receive a more effectively useful sifting than a summary like this of Professor Lister's, which is so evidently the work of an accomplished clinical teacher and hospital operator, and so free from the merely mechanical routine of the dissecting room. Our younger army surgeons may safely adopt Mr. Lister's general principles of operating and dressing; and even those who begin to feel like veterans with the amputating knife and in the hospital, may study his pages with immediate advantage to their labours, and with probably still greater benefit to the final establishment of their own conclusions. We regret, therefore, our inability to dwell upon many matters which have struck us as quite worthy of special consideration; and we sincerely hope that the author may allow the separate circulation of both papers, in such a shape as will bring them within reach of the hundreds who could soon test their precepts in the field.

The article on anæsthetics is short, but clear and practical, at least in regard to chloroform. Very little is said about ether, except that it is considered less potent and more irritating, less agreeable in odour, more volatile, and more inflammable than chloroform; and that it has therefore been generally superseded by the latter in Europe, although still extensively used in America. Both agents have been so largely employed by intelligent operators in the recent campaigns of our armies, that some definite comparison must by this time have been put on record, which may hereafter determine the real superiority, for availability and pleasant action, of chloroform to ether, and its approximately or entirely equal safety under proper management. It is to be hoped that some of our army surgeons have at last discovered the most effective and economical mode of *safely* using both ether and chloroform for anæsthetic purposes. They have probably become convinced that the danger to life, which amounts to nothing, without gross carelessness, in the employment of ether, is not seriously increased in the resort to chloroform, and may be prevented almost wholly by sufficient care in the use of either of these two anæsthetics. They must be satisfied also, by this time, that great prostration from shock or other causes is or is not a contra-indication for anæsthetic action; and they ought to be able to tell us whether, in case of such prostration, ether or chloroform is the preferable agent.

Prof. Lister expresses strong doubts of the injurious agency of chloroform in some of the alleged cases of fatal inhalation. Nor does he agree that the danger is any greater in disease of the heart. He is more inclined to attribute a positively sustaining power to the chloroform anæsthesia, which enables patients to survive under depressing influences that might otherwise destroy them. This view of the action of chloroform leads him to regard it as an important agent to be relied upon in averting the danger of prostration from injury, and, as therefore aiding very materially in the performance of operations before reaction has commenced. We believe this position to be in accordance with the civil and military experience of this country, as well as of Europe, and are disposed to regard it as applicable to ether no less than chloroform, at least in hospital practice. What may be the rule, as determined in the field, we have not learned from actual experience. Chloroform, however, is so much more convenient for carrying purposes, that the question between it and ether, in the field, may be of comparatively little practical moment. If ether can be transported without loss from evaporation as securely as chloroform, and can be made to produce its anæsthetic effects as promptly and with as small a consumption of the supply, which is necessarily limited on such occasions, then the certain difference in favour of the ether as to safety, at least with careless operators, would justify, if not demand, its preference to chloroform. We hope to see the administration of ether shown to be, in proper hands, as prompt and economical in its action as chloroform, although there is no prospect of its becoming less likely to evaporate or burn; and we shall expect that its use as an anæsthetic will rather be increased than diminished in civil life, by the observations of those who are now watching its *modus operandi* in the military hospitals and fields of this country.

It is the *overdose* of chloroform, or its too long continuance, that, in Mr. Lister's opinion, is the most frequent cause of death. In this he is on the side of the majority of those who have studied the vital question both as to ether and chloroform; and touches at once upon the leading practical point of the whole inquiry. Stertor and obstructed respiration

are the alarming signs which the surgeon must attend to with the greatest care.

"The most convenient test of the patient being prepared for undergoing the operation is presented by the eye; not in the size of the pupil, which is inconstant in its indications, but in what is commonly spoken of as insensibility of the conjunctiva; though in truth it has no relation to sensation, which is abolished considerably earlier; but when unconscious winking no longer occurs, on the eyeball being touched with the tip of the finger, we have a good criterion of the suspension of reflex action in the body generally. At this period the pulse is about in a normal condition, and the respiration is usually either natural or very slightly stertorous, though persons with a tendency to swoon may do so almost from the commencement of inhalation. But if the administration of the chloroform be further persisted in, strongly stertorous breathing will soon be induced, and will become aggravated until it passes into complete obstruction to the entrance of air into the chest, though the respiratory movements of the thoracic walls still continue. Occasionally, however, the premonitory stertor is deficient, and the breathing more or less suddenly obstructed. This is a point of great importance; for, without close attention, it may escape notice, when the patient will be placed in imminent peril. For, though the respiration may be resumed spontaneously, this cannot be relied on, and it would seem that when chloroform is given in an overdose, the cardiac ganglia are apt to become enfeebled; and, on this account, asphyxia produces more rapidly fatal effects than under ordinary circumstances. But if the obstructed state of the breathing is noticed as soon as it occurs, and the cloth is immediately removed from the face, and the tip of the tongue seized with a pair of artery forceps and drawn firmly forwards, the respiration at once proceeds with perfect freedom, the incipient lividity of the face is dispelled, and all is well." (pp. 100-1.)

Prof. Lister is "anxious to direct particular attention to the drawing out of the tongue, because I am satisfied that several lives have been sacrificed for want of it." The traction should be decided, however, or it may fail. We have been very much impressed with the effect of this expedient on two different occasions—one of imminent death under chloroform, and the other of a similar state of things occurring to a patient who was supposed to be inhaling ether. In each case respiration had ceased for a moment, and the countenance had become rigid, when we threw the patient's head over the edge of the bed with one hand, and, with the other, seized the tongue and forcibly drew it out as far as possible. The air rushed in with a peculiar sound, the patient heaved a sigh, and again began to breathe. In the chloroform case there had been no mechanical interference with the respiration on the part of the assistant who held the folded napkin. In the ether case, the patient was deliberately suffocated through the carelessness of the assistant, the ether being inhaled from a cup-shaped sponge in a stiff and entirely close pasteboard cone, which was so firmly pressed upon the face as not to allow any air whatever to mingle with the anæsthetic. The hand, with its fingers, is the best instrument to employ for this traction of the tongue, because it is always ready and leaves no mark behind.

Our author gives a very interesting account of some investigations, made with great care upon himself, in regard to the nature of the stertor and the rationale of the traction of the tongue in stopping it, which satisfied him that the pulling out of the tongue does not act merely mechanically, but through the nervous system by a kind of reflex operation. He found that, besides the *palatine* snoring, there is another form

"which is the profound stertor essentially concerned with chloroform, depends on a cause seated further down the throat, and, for reasons to be given immediately, may be termed *laryngeal*. By digital examination of my own throat, I

found that the latter variety, and the complete obstruction into which it passes, could still be produced when the tongue was separated by a considerable interval from the back of the pharynx, while a free passage to the air existed on-wards to the lips, which showed that the general belief that the obstruction depends on a 'falling back of the tongue' is erroneous. Also the epiglottis, instead of being folded back during the obstruction, as some have supposed, had its anterior edge directed forwards; and though it was thrown into vibrations when the stertor was strongest, it was evident that the cause of the sound was more deeply placed. I also found that, although firm traction upon the tongue abolished the obstruction and the stertor, it did not appear to produce the slightest change in the position of the base of the tongue; nor did it move the os hyoides upon the thyroid cartilage, as examined from without. Hence I was led to conclude that the beneficial effect of this procedure could not be explained mechanically, but must be developed in a reflex manner through the medium of the nervous system." (p. 102.)

He goes on to describe his observations on his own vocal apparatus with the laryngoscope. He then ascertained that

"The true laryngeal stertor results from the vibration of the portions of mucous membrane surmounting the apices of the arytenoid cartilages, *i. e.*, the posterior parts of the aryteno-epiglottidean folds (thick and pulpy in the dead body, but much more so when their vessels are full of blood), which are carried forwards to touch the base of the epiglottis during the stertorous breathing, and are placed in still closer apposition with it when the obstruction becomes complete. Having one hand at liberty, I was able to observe the effect of drawing forward the tongue under these circumstances, and saw that firm traction induced the obstructing portions of mucous membrane in contact with the epiglottis, to retire from it for about an eighth of an inch, so as to allow free passage for the air, while the epiglottis itself was not moved forwards in the slightest degree." (pp. 102-3.)

We are unable to give more space to this interesting paper except to note that he continues to urge a close watching of the respiration as all-important, and a disregard of the pulse as immaterial and likely to lead astray, and that he gives chloroform without hesitation in cases of heart disease; quoting, in support of these precepts, his own eight years' experience, and the authority of Mr. Syme, who has long observed and taught them without having lost a patient in about five thousand trials.

Plastic surgery is the subject of the article next in order, by Mr. Holmes Coote. Beginning with a short historical sketch of the rise of Taliacotian operations under the auspices of the famous professor of Bologna, Mr. Coote, occupies some seven pages with an instructive review of the general principles of plastic surgery. In the course of this he takes care to make the right acknowledgment to Dr. Marion Sims for "his energetic advocacy" of the use of metallic sutures, and for their consequent introduction into practice, especially in plastic operations. Rhinoplasty and cheiloplasty are fully discussed, including the restoration of the nose, hair-lip, lower lip and upper lip; also plastic operations on the ear, on the penis, the management of adherent and contracted vagina, and of cicatrices from burns and escharotics. The directions are ample and easily understood, with the assistance of illustrations in some instances, and contain many very useful hints for the guidance of inexperienced practitioners. His advice on the treatment of contracted cicatrices is especially worthy of recollection; it is that "no cutting instrument should be used." Again, "It may be laid down as a rule, almost without exception, that a cicatrix should never be touched with a knife." He tells us that these operations have for some time past been discarded as useless at St. Bartholomew's and some other leading hos-

pitals of London. The best that can be done is, with gradual dilatation, extension and pressure, aided by the application of unguents, to stimulate the removal, by absorbent action, of the contracting tissue. The results of this treatment, he assures us, "are mostly satisfactory, and failure proceeds from want of patience, which substitutes forcible, and, as it were, spasmodic efforts, for persevering and unremitting gentleness."

Under the head of "Diseases of the Organs of Special Sense," Mr. James Hinton contributes a carefully prepared and practical chapter on "Diseases of the Ear," and Mr. Ure a well arranged one on "Diseases of the Nose," which is equally practical in character.

The next paper, on "Diseases of the Larynx," was the unfinished work of the late Mr. Henry Gray, whose sudden death prevented its final revision by the author. The disorders treated of are acute laryngitis, œdema of the glottis, erysipelatous laryngitis, diffuse inflammation of the cellular tissue of the larynx, syphilitic ulceration of the larynx, tumours of the larynx and trachea, hysterical affections of the larynx, spasm of the glottis, chronic laryngitis; the same with ulceration, and with affections of the laryngeal cartilages as the result of the inflammation. Mr. Gray's chapter is followed by a supplementary one on the "Laryngoscope," by Mr. A. S. Durham, which was rendered necessary by the fragmentary condition in which the notes on this subject were left by their lamented author. Mr. Durham's short account of this new instrument and its applications appears to be sufficient, historically and practically, to afford an efficient introduction to its use, and to show its really great value in the chronic disorders of the larynx and all the obscure affections of this organ. Mr. Durham is not very decided as to the general utility of the laryngoscope; but while ready to admit that it may remain in the hands of the few, he is yet convinced that it is destined to do much good to the many. In this respect it does not differ from the most of its predecessors in the march of improvement; and it will not be allowed to remain in obscurity merely on account of the ignorance and indolence which obstruct the progress of every new instrument where the necessary skill in manipulation and observation are only to be acquired by special and laborious exercise.

The next grand division is devoted to diseases of the organs of the circulation, and begins with a chapter by Mr. C. H. Moore, surgeon to Middlesex Hospital, on the "Diseases of the Absorbent System." Wounds of lymphatics, inflammation of lymphatics (angeioleucitis), inflammation of lymphatic glands (adenitis), hypertrophy and atrophy of glands, strumous disease of glands, lymphatics in syphilis, gonorrhœa, cancer, in indolent diseases—including ulceration, erysipelas and nævi, morbid contents of lymphatics, obstruction, obliteration and varicosity of lymphatics, excision of glands by operation—are severally discussed with care and ample fulness where they are not considered in other parts of the work. Strumous, syphilitic, gonorrhœal, and cancerous disease of the glands, for instance, are but slightly touched upon, as they are sufficiently studied in the articles on their several forms of general disorder. Other special affections of the lymphatic system receive a close practical consideration in regard to their pathology and local and general treatment.

Next in order comes the section on "Diseases of the Veins," by Mr. G. W. Callender, Assistant-Surgeon to St. Bartholomew's Hospital. The first topic is adhesive phlebitis, or inflammation of the lining membrane of the veins, which Mr. Callender agrees with the more recent pathologists in regarding as of "more than doubtful occurrence." He compares the views

of John Hunter, Meckel, Gendrin, and others, with those of Guthrie, Travers, Lee, and others, in opposition to them; and, after referring to the experimental demonstration by Lee of the fallacy of Gendrin's experiments as to plastic deposits in irritated veins when really deprived of blood, the author shows conclusively, by a repetition and extension of Mr. Lee's experiments, that in the lower animals, at least, the internal coat does not inflame when irritated; and that the lymph, when present, finds its way into the vein from without, and is not exuded from or through the lining membrane.

"From these considerations," he says, in conclusion, "it is manifest that adhesive phlebitis has been very variously described and accounted for, and that its occurrence has been denied by some pathologists. There can be no doubt but that veins are repaired without its aid; and experiments upon animals, taken for what they are worth, show that these vessels do not inflame when irritated. Absence of vessels from their lining membrane points, one would think, a reason for this immunity. A tissue thus circumstanced may eventually be involved when adjacent parts are affected, but it does not originate disease. As the barrier between tissues, often inflamed on the one hand, and the blood-stream on the other, it would obviously discharge an important function did it prevent lymph from being effused on the internal surface of the vein. For, although this lymph might be swept away without producing any local effect, it could not be mingled with the blood without risk of spoiling that fluid, or of causing secondary mischief by becoming entangled in and so obstructing the capillary vessels." (p. 291.)

Before going on to the description of suppurative phlebitis or diffuse inflammation of the veins, a very interesting account is given of a condition which until recently has been too often confounded with inflammatory action—coagulation of blood within the veins, *embolism*, or *thromballosis*, as Mr. Callender prefers to name it. The nature, causes, and consequences, as well as the diagnosis and treatment, of this peculiar disorder of the circulation, are very carefully explained and illustrated in the course of about ten pages, which are well worthy of the reader's attention.

Suppurative phlebitis is regarded by Mr. Callender as "in fact nothing more than a diffused phlegmonous inflammation," which "follows the course of veins which, acting as conductors, favour its rapid extension in the direction of least resistance; and hence, as a rule, the disease passes from the small to the larger vessels, since the cellular surroundings of the latter offer the easier route for its advance." We cannot follow him in support of this position, which we believe to be the true one, and well sustained, or in the excellent account of the disease and its treatment, and the distinction to be made between it and clot-obstruction, or thromballosis.

The next most important topic of the paper is phlebectasis or varicose veins. He calls attention to the fact, known to hospital surgeons and especially noted by recent continental writers but overlooked by Boyer and others, that the seat of varicose disease is as often in the deep veins of the lower extremities as in the trunk of the saphena, or in that of any of the superficial veins, and that it is just as likely to commence in the one set as in the other.

The management of varices in the early stage, either slightly involving the surface vessels, or being limited to the deep ones, is not difficult, and admits of permanent benefit, but the disorder is incurable if of long standing, although capable of material palliation. From all the measures resorted to for the purpose of obliteration, we are justly told—



"It is quite certain that only a temporary benefit is obtained; for after one mass of varices has been removed, the anastomosing veins around soon acquire a varicose condition, and the disease is perpetuated. In deciding upon performing any one of the many operations open to choose from, it must be the relief, not the cure of the varix which is anticipated; and no doubt there are cases, yet not so many as some would have us to believe, in which the pain of the varix, the impossibility of healing a large ulcer, the unfitting of a patient for his every day work, justify the operation for the temporary benefit." (p. 318.)

We have long since given up the hope of securing more than a temporary relief, of varying amount and duration, by these operations, and hence accord entirely with this rather discouraging view of an expedient which is too recklessly resorted to by young operators. We agree also with Mr. Callender in the opinion that the danger of these operations on varicose veins, especially with the caustic, the pin, or the metallic suture, is exaggerated, at least in regard to properly selected cases. The liability is not so much in the veins as in the tissues directly around them, and depends not on the local but the general condition of the patient. This general condition, however, from the very nature of the disease, is more or less likely to be sufficiently bad to render the radical operations dangerous, even when the dyscrasy may be very slightly manifested. This kind of interference, therefore, can only be justified in any case by the urgent necessity which serious inconvenience, suffering or positive disability may create; and, as a matter of course, it should be resorted to only under the best available sanitary influences and precautions.

The first of the essays on Diseases of the Arteries, gives us an excellent account of atheroma, and obstruction, including embolism, of the arteries, by Mr. C. H. Moore, Surgeon to the Middlesex Hospital, which is so full of interest and practical instruction, that we regret our inability to dwell upon it as a most complete exposé of its subjects. This is followed by an admirable clinical monograph on aneurism, by Mr. Holmes, the editor, assisted in certain parts by Mr. E. A. Hart, Surgeon to the West London Hospital.

Mr. Hart contributes the sections on the treatment of aneurism by digital pressure, by flexion, by manipulation, by galvano-puncture, by coagulating injections; also those on arterio-venous aneurism, cirroid aneurism, and aneurism by anastomosis. Mr. Holmes gives us a very complete and well digested view of all the other branches of the subject, including the regional surgery and the operations on the various arteries. An unusually clear and practical exhibition of the pathology of aneurism is given in the introductory description of the various kinds of aneurism, and of their causes and progress. This is followed by a comprehensive and equally practical inquiry into the spontaneous cure, including the medical treatment; the symptoms and the diagnosis; and, lastly, the mechanical treatment of aneurism by the various methods.

A convenient feature of the introductory portion is a nomenclature table, which exhibits the terms adopted by Mr. Holmes, in parallel columns with those used by the French and English, as exemplified in Broca's *Treatise* and Erichsen's *Science and Art of Surgery*. This table is useful in presenting the author's concise and accurate anatomical definitions, while, by comparing his nomenclature with that in common use, it avoids the confusion and ambiguity which even the practical superiority of his specific terms would not justify in a clinical essay on a class of anatomical lesions which are intricate enough to puzzle the student under any circumstances.

The different topics, as treated by Messrs. Holmes and Hart, are full of

interest, historically as well as practically, and are abundantly illustrated with cases and statistics drawn from all sources, among which those of our countrymen, G. W. Norris and Stephen Smith, are most conspicuous. As we are obliged to pass on to other portions of the volume, we cannot give a better idea at once of the author's mode of applying practice to theory, and of his views in regard to the different methods of treatment, than by quoting from his general remarks in relation to the spontaneous cure of aneurism. After describing the different processes by which aneurisms have been known to become cured, he says :—

“The surgical treatment of aneurism, as far as it is successful and rational, is merely an artificial imitation of these processes. The treatment most in use in the present day, that by compression of the artery above the tumour, has no other aim than to imitate nature in the first of the processes described above, so as to slacken the circulation through the aneurism, and allow the blood in it an opportunity of coagulation. The Hunterian operation has essentially the same object, and, although it accomplishes it in a somewhat different way, and by obliterating a portion of the artery above the tumour, puts a more decided, but at the same time more temporary check on the current of blood. The cure by flexion (Mr. Hart's method), aims at combining the first process with the second, in which the aneurism is compressed by the parts around it, and itself (perhaps) compresses the vessel. Mr. Fergusson's plan of manipulation, or crushing, is derived from observation of cases in which the natural cure was effected, or attempted, by the impaction of a clot in the artery leaving the sac. Brasdor's method, so far as it is justifiable at all in practice, *i. e.*, with the modifications hereafter to be described, is identical with this in its object, and rests upon the same pathological basis. Direct pressure appears to cure aneurism usually by displacing portions of the clot, and may, perhaps, sometimes act by setting up inflammation in the sack or parts around it, which leads to coagulation. Finally, the old method, by opening the sac and tying both ends of the artery, bears the strongest analogy to the cure by suppuration, and is, in fact, a kind of excision of the tumour.”

“The methods of spontaneous cure have been dwelt upon at this length with the view of impressing upon the mind of the reader that all successful plans of treatment are successful from being imitations (whether designed or fortuitous) of these natural processes, in the hope that this fact may lead practitioners to a more careful study of the workings of nature in this particular, and the conditions under which she works. Such a study carried on by various observers, could hardly fail to be fruitful in results which would lead to the preservation of numerous lives that would be sacrificed to the idea that internal aneurism is a disease almost necessarily fatal. What else is it than the careful study of the natural process of cure that led Hunter to his brilliant and daring proposal of tying the artery away from the seat of the disease? What else led the Irish surgeons to see that compression, in order to imitate nature, need not suspend the circulation entirely, need not even act continuously; and thus to substitute for the intolerable torture inflicted by the old plan of compression, a treatment which, in ordinary cases, is harmless, and, in a few, absolutely painless? Let us remember how comparatively short a time it is since one of the most celebrated surgeons of his time (Pott, *Chir. Works*, vol. iii. p. 220), announced his preference for amputation over all other methods of treating popliteal aneurism. Let us not forget that one of our most justly valued living authors on this subject (Hodgson, *Dis. of Arteries*, p. 190), was so satisfied with the advance which had been made at the time he was then writing, as to express his opinion that ‘the improvements that have been effected in the mode of applying the ligature to arteries, have brought the surgical treatment of aneurism to a degree of perfection which leaves but little room for advancement.’ Nor was such an appreciation of modern surgery at all exaggerated or unreasonable to those who looked at it as Mr. Hodgson did, by comparison with the mortality after the old operation. In our times surgery has made such rapid advances, that the mor-

tality, which under the system praised by Mr. Hodgson, must have amounted to a large percentage of those operated on, is now very much reduced by the invention of instrumental compression, and even this will, no doubt, soon be further reduced by the more frequent use of flexion and digital pressure. So may it be in medical practice. At the present day, it is hardly too much to say that a patient with internal aneurism is condemned to death as certainly as one with external aneurism used to be to amputation. A century hence we may hope our descendants will have as solid reason to boast of their improvement upon the science of Watson and Latham, as we have to congratulate ourselves on our advance upon the doctrines of Pott." (pp. 371—373.)

Under the head of organs of locomotion and innervation we have a short but sufficiently full article on affections of the muscular system, prepared by Mr. George Tatum, Surgeon to St. George's Hospital; a concise and comprehensive practical chapter on orthopædic surgery, illustrated with woodcuts and very useful, by Dr. Little; another, excellent as usual, and equally valuable, on diseases of the bones, by the editor, Mr. Holmes; a short but clear and comparatively full one on diseases of the joints, by Mr. A. A. Johnson, late Surgeon to the Hospital for Sick Children; a careful summary on excision of bones and joints, by Mr. Holmes; an interesting paper on diseases of the spine, including the various attendant and consecutive abscesses, by Mr. A. Shaw, Surgeon to Middlesex Hospital; and a brief but characteristic and able review of diseases arising from injury or other lesion of the nerves, by Dr. Brown-Séquard. The volume terminates with an interesting essay on diseases of the tongue, by Mr. Holmes Coote.

Each of these papers presents more or less evidence of careful study as well as practical familiarity with its subject; all are well brought up in the observations of the day, and are enriched throughout with illustrative cases. The article on orthopædic surgery is particularly interesting in its pathology and in the simplicity and practical good sense of its various directions, which are, by the by, especially authoritative as coming from one of the first of British orthopædists. In the essay on diseases of the bones, Mr. Holmes treats at length of simple inflammation and its consequences; osteitis, diffuse periostitis, osteomyelitis, chronic abscess, caries and necrosis; constitutional disorders, such as scrofula, syphilis, rheumatic and gouty affections, mollities ossium, cancer, pulsatile tumours, and cancerous ulceration; non-malignant tumours, enchondroma, exostosis, diffused bony or innocent osteoid tumours, serous and sanguinous cystic tumours, fibrous and fibro-cystic tumours and entozoa; hypertrophy and atrophy; and spontaneous fracture.

Among these topics diffuse periostitis, osteomyelitis, chronic abscess, and scrofula in bone, appear to be most thoroughly considered by Mr. Holmes. The first two are well known to have attracted increasing attention for some time past; and the notices of them in this volume, as very painful and often dangerous disorders, will reward a careful study.

In his paper on the affections of the joints, Mr. Johnson treats first of diseases common to all the joints, and secondly of diseases of individual joints. In the first part the diseases of the synovial membranes are first considered, next those of the articular extremities of the bones, of the articular cartilages, and of other tissues in and around the joints; ankylosis; articular neuralgia; articular hysteria; wounds of joints. Part Second includes strumous disease of the hip; morbus coxæ senilis; neuralgia of the hip; diseases of the pubic and sacro-iliac joints; of the knee; of the bursæ of all the different articulations.

These various morbid conditions are particularly well described and explained, under the light of personal experience and of the most recent views

and observations; but the details of treatment, especially the mechanical portion of the treatment, are scarcely as full and precise as they might have been with advantage, and as they are generally found to be in the different papers of the series.

We have in the paper on excision of the joints a cautious but intelligent and liberal summary of the most important points connected with the question and mode of performing these formidable operations. For the history of excisions, Mr. Holmes refers in a very complimentary manner, to the excellent and elaborate monograph of our countryman, Dr. R. M. Hodges, of Boston, Mass., and quotes from its pages repeatedly in the course of his paper.

Starting with the admission that a large amount of success has attended the attempt to preserve limbs by the removal only of the diseased portions of the bone, and stating his acceptance of the general rule that a large or important joint ought not to be excised while any reasonable prospect exists of a cure without operation, he thinks that a surgeon may very reasonably propose to cut short the disease by removing smaller bones, externally diseased, and easily removable, "while yet he may allow that cure is not hopeless," under favourable circumstances. He has often noted excellent results from the excision of bones of the tarsus and metatarsus, which proved the superiority of such treatment to that of waiting for a cure, especially in children, whose restlessness renders confinement less likely to be borne. He does not advocate such operations in the hand and wrist, on account of the danger to the tendons in operations, and consequent loss of motion, which would not be likely to occur from the ordinary inflammation. The question between excision and amputation is far more frequently perplexing to the surgeon, in Mr. Holmes' opinion, than that between excision and the expectant treatment, except, perhaps, in cases of disease of the hip-joint. On this latter question he presents a careful summary of the general indications for one operation or the other, under four heads, as follows: 1, the situation and function of the bone or joint to be excised; 2, the state of the patient as to general health, constitutional affection, and age; 3, the nature and extent of the disease; 4, various extraneous circumstances. These general indications for a choice of operation are followed by some general observations on the operations themselves, and then by the account of excisions in particular.

The paper of Dr. Brown-Séquard will attract attention as a condensed and lucid exposition of a very important series of morbid phenomena, by one who is probably more competent to discuss them than any other living writer—the "*remote, indirect, or reflex*" effects of irritation of nerves. It is particularly interesting to us at the present time, when illustrative cases are accumulating in our military hospitals, and present the largest field of observation. He reminds us that—

"Hardly is there any affection that cannot be considered as having sometimes been produced by a reflex action, the cause of which is an injury, a disease, or at least an irritation of a nerve. If, instead of confining myself to the lesions of trunks and branches of nerves, I intended to describe the effects of irritation of the ramifications of nerves in the skin or in the mucous membranes, I could easily prove that most of the inflammations of the various thoracic or abdominal viscera take place through a reflex action, the starting point of which is some irritation, by cold, of peripheric, sensitive, or centripetal nerve-fibres. I will not say more here about this influence of cold, as my purpose, as already stated, is to give an outline of the reflex effects of injuries or diseases of other parts of nerves than the network of their terminal ramifications.

"Of the various reflex effects of irritation of centripetal nerves, the following are the principal, of which I propose to speak successively: *epilepsy, tetanus, hysteria, chorea*, and other *convulsive affections, paralysis agitans, paralysis* of various kinds (*hemiplegia, local paralysis, &c.*), *amaurosis, anæsthesia, insanity, delirium, coma, neuralgia*, and other *painful affections, inflammation, atrophy*, and other *morbid alterations of nutrition and secretion*. After having mentioned clear and positive facts, showing that all these affections may be caused by an injury to, or a disease of, a nerve, I will briefly give the rules concerning the diagnosis and treatment of injuries and diseases of nerves. This essay will, therefore, consist of two parts; the first, relating to facts showing the reflex effects of irritation of centripetal nerves; the second, the principal features and rules of diagnosis, and treatment of diseases and injuries of branches and trunks of nerves." (p. 877.)

A very large number of curious facts are cited from various authorities in illustration and support of the views of reflex action described in the first part. In the second part, an outline of the means of diagnosis and the rules of treatment is given in a very few words, but quite sufficiently for practical purposes.

The cases occurring among our wounded soldiers of lesion of the nerves, especially from gunshot wounds, are already so numerous that we hope to see these postulates of Brown-Séquard thoroughly tested, if not confirmed, by the experience of the war, and should therefore be glad to see his important chapter separately and widely circulated in the United States.

We are unable to accompany our authors any further in their interesting essays, and are obliged to leave them and the remainder of their volume without further discussion of its very useful matter. We cannot pretend to present more than a very superficial glimpse of its character and actual contents. There is so much that will attract the surgical student and practitioner, and especially the hospital surgeon, that there can be no fear of the entire success of the "system" in the hands of every practical reader; and we sincerely trust that a sufficient number of copies may be brought into this country to reach some portion of the crowds of really able men, whom our military service is rapidly developing into veterans, expert in the management of the most important forms of surgical disease and injury. With such opportunities and such an example and monitor before them, in the work of men not older and perhaps less experienced than themselves, we may hope for a material advance in the surgical teaching of this country. We shall certainly look for still greater strides than have yet been taken in the actual practice of surgery, notwithstanding all that has been done for the progress of the art and science within the last half century on both sides of the Atlantic.

E. H.